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| APPLICATION NO.   | FILING DATE   | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |          |  |                        |  |          |              |      |  |           |               |            |       |
|---|---------------|----------------------|---|------------------|----------|--|------------------------|--|----------|--------------|------|--|-----------|---------------|------------|-------|
| 10/723,767  | 11/26/2003    | Koji Yanagihara      | 16UL03229   | 9684             |          |  |                        |  |          |              |      |  |           |               |            |       |
| 7590<br>Patrick W. Rasche<br>Armstrong Teasdale LLP<br>Suite 2600<br>One Metropolitan Square<br>St. Louis, MO 63102 |               |                      | 01/16/2008<br><table border="1"><thead><tr><th colspan="2">EXAMINER</th></tr></thead><tbody><tr><td colspan="2">MEHTA, PARIKHA SOLANKI</td></tr></tbody></table> <table border="1"><thead><tr><th>ART-UNIT</th><th>PAPER NUMBER</th></tr></thead><tbody><tr><td>3737</td><td></td></tr></tbody></table> <table border="1"><thead><tr><th>MAIL DATE</th><th>DELIVERY MODE</th></tr></thead><tbody><tr><td>01/16/2008</td><td>PAPER</td></tr></tbody></table> |                  | EXAMINER |  | MEHTA, PARIKHA SOLANKI |  | ART-UNIT | PAPER NUMBER | 3737 |  | MAIL DATE | DELIVERY MODE | 01/16/2008 | PAPER |
| EXAMINER  |               |                      |   |                  |          |  |                        |  |          |              |      |  |           |               |            |       |
| MEHTA, PARIKHA SOLANKI  |               |                      |   |                  |          |  |                        |  |          |              |      |  |           |               |            |       |
| ART-UNIT  | PAPER NUMBER  |                      |   |                  |          |  |                        |  |          |              |      |  |           |               |            |       |
| 3737  |               |                      |   |                  |          |  |                        |  |          |              |      |  |           |               |            |       |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/723,767 | <b>Applicant(s)</b><br>YANAGIHARA ET AL. |  |
|                              | <b>Examiner</b><br>Parikha S. Mehta  | <b>Art Unit</b><br>3737                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 5 November 2007 have been fully considered but they are not persuasive. Applicant submits that King (US Patent No. 5,127,410) does not teach the second partial enclosure that covers the opening of the first partial enclosure (Remarks p. 5). Applicant ('410) alleges that, since King ('410) teaches the second lens assembly to cover the opening, King ('410) cannot teach a second partial enclosure to cover the opening as is presently claimed. Examiner clarifies that the film (e.g. a Mylar film) disclosed by King ('410) (col. 4 lines 30-36) is the "second partial enclosure" as claimed. Accordingly, King ('410) does in fact teach a second partial enclosure as claimed, and the previous rejection is maintained and reiterated herein.

### *Specification*

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 8-10, 12-14 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by King (US Patent No. 5,127,410), hereinafter King ('410).

Regarding claims 1, 3, 8-10, 12, 14 and 19, King ('410) discloses an ultrasonic probe comprising a first partial enclosure formed of hard plastics having an opening and a second partial enclosure integrally formed with the first enclosure so as to cover the opening at the tip, wherein the second partial enclosure is formed of a flexible (soft) plastic film in contact with the transmission/reception surface of the ultrasonic transducer, and the ultrasonic transceiver unit extends

through the opening (Abstract, col. 2 lines 39-49, col. 4 lines 5-7). King ('410) states that the film is bonded to a "film backing lens," (Abstract) which constitutes the acoustic lens as claimed. The flexible plastic Mylar film of King ('410) constitutes the thermoplastic polymer claimed in the instant application.

**Regarding claims 2 and 13,** King ('410) is silent with respect to the process by which the transceiver unit is formed. The claimed phrase "wherein the integrated molding of the first partial enclosure and the second partial enclosure is performed by double molding" is being treated as a product by process limitation. Product by process claims are not limited to the manipulations of the recited steps, only to the structure implied by the step. Thus, even though King ('410) does not expressly discuss the process by which the enclosures are formed, it appears that the product in King ('410) would be the same or similar as that claimed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-7, 11, 15-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over King ('410) in view of Silber (US Patent No. 5,928,154), previously cited by Applicant, hereinafter Silber ('154).

**Regarding claims 4-7 and 15-18,** King ('410) substantially teaches all features of the present invention as previously discussed for claim 1. King ('410) is silent with respect to specific types of hard plastic which may be used for the first enclosure. In the same field of endeavor, Silber ('154) teaches an ultrasonic probe having a first enclosure made of thermoplastic material, polyethylene, polybutylene, or any other material blend providing properties of both elastomers and plastics (col. 7 lines 51-56, col. 8 lines 40-46). Silber ('154) teaches these materials for enhancing the ergonomic quality of the probe while allowing the sonographer to maintain sufficient control of the probe (col. 3 lines 16-23, col. 3 line 65-col. 4 line 2). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the first enclosure of King ('410) to be made of any of the materials of Silber ('154), in light of the motivation provided by Silber ('154).

**Regarding claims 11 and 20**, Silber ('154) further teaches that the housing of the probe may be color-coded to facilitate identification of the type or model of the probe, which also includes different center frequencies as claimed in the instant application (col. 9 lines 12-14). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the probe of King ('410) to also comprise a color-coding indicative of the center frequency of the probe to permit the sonographer to identify the probe type, in view of the teachings of Silber ('154).

### *Conclusion*

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parikha S. Mehta whose telephone number is 571.272.3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Parikha S. Mehta

Examiner – Art Unit 3737



**BRIAN L. CASLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3700**